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**BEAM POWER TUBE***Useful at Frequencies up to 125 Mc***GENERAL DATA****Electrical:**

Heater, for Unipotential Cathode:

Voltage. . . . . 6.3  $\pm$  0.6 . . . . . ac or dc volts

Current. . . . . 0.9 . . . . . amp

Transconductance (Approx.)

for plate volts = 250,

grid-No.2 volts = 250,

grid-No.1 volts = -14 . . . . . 6000 . . . . .  $\mu$ hos

Mu-Factor, Grid No.2 to

Grid No.1 for plate volts =

250, grid-No.2 volts = 250,

and grid-No.1 volts = -20 . . . . . 8

Direct Interelectrode Capacitances:

Grid No.1 to plate<sup>o</sup>. . . . . 0.2 max. . . . .  $\mu$ fGrid No.1 to cathode &  
grid No.3, grid No.2,  
and heater . . . . . 12 . . . . .  $\mu$ fPlate to cathode & grid  
No.3, grid No.2,  
and heater . . . . . 7 . . . . .  $\mu$ f**Mechanical:**

Mounting Position. . . . . Any

Maximum Overall Length . . . . . 5-3/4"

Seated Length. . . . . 4-31/32"  $\pm$  5/32"

Maximum Diameter . . . . . 2-1/16"

Weight (Approx.) . . . . . 3 oz

Bulb . . . . . ST-16

Cap. . . . . Small (JETEC No.C1-1)

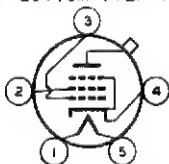
Base . . . . . Medium-Micanol-Shell Small 5-Pin (JETEC No.A5-11)

Basing Designation for BOTTOM VIEW . . . . . 5AW

Pin 1-Heater

Pin 2-Grid No.2

Pin 3-Grid No.1



Pin 4-Cathode,

Grid No.3

Pin 5-Heater

Cap-Plate

**AF POWER AMPLIFIER & MODULATOR - Class AB<sub>1</sub>***Triode Connection--Grid No.2 Connected to Plate***Maximum Ratings, Absolute Values:**

	CCS*	ICAS**	
DC PLATE VOLTAGE . . . . .	400 max.	400 max.	volts
MAX.-SIGNAL DC PLATE CURRENT*. . . . .	125 max.	125 max.	ma
MAX.-SIGNAL DC PLATE PLUS GRID-No.2 INPUT* . . . . .	50 max.	50 max.	watts
PLATE DISSIPATION PLUS GRID-No.2 INPUT* . . . . .	25 max.	30 max.	watts

<sup>o</sup> with external shield JETEC No.312.

♦, •, ••, \* : See next page.

← indicates a change.



# BEAM POWER TUBE

	CCS <sup>•</sup>	ICAS <sup>••</sup>	
<b>PEAK HEATER-CATHODE VOLTAGE:</b>			
Heater negative with respect to cathode . . . .	135 max.	135 max.	volts
Heater positive with respect to cathode . . . .	135 max.	135 max.	volts

<b>Typical Operation:</b> <sup>•</sup>	CCS <sup>•</sup>	ICAS <sup>••</sup>	
<i>Values are for 2 tubes</i>			
DC Plate Voltage . . . . .	400	400	volts
DC Grid-No.1 (Control-Grid) Voltage . . . . .	-45	-45	volts
Peak AF Grid-No.1-to-Grid-No.1 Voltage <sup>••</sup> . . . . .	90	90	volts
Zero-Signal DC Plate Current . . . . .	64	64	ma
Max.-Signal DC Plate Current . . . . .	140	140	ma
Effective Load Resistance (Plate to Plate) . . . . .	3000	3000	ohms
Max.-Signal Driving Power (Approx.) . . . . .	0	0	watts
Max.-Signal Power Output (Approx.) . . . . .	15	15	watts

## Maximum Circuit Values (CCS or ICAS):

<b>Grid-No.1-Circuit Resistance:</b> <sup>••</sup>			
With fixed bias . . . . .		0.1 max.	megohm
With cathode bias . . . . .		0.5 max.	megohm

## AF POWER AMPLIFIER & MODULATOR - Class AB<sub>1</sub>

### Maximum Ratings, Absolute Values:

	CCS <sup>•</sup>	ICAS <sup>••</sup>	
DC PLATE VOLTAGE . . . . .	600 max.	750 max.	volts
DC GRID-No.2 (SCREEN) VOLTAGE . . . . .	300 max.	300 max.	volts
MAX.-SIGNAL DC PLATE CURRENT* . . . . .	120 max.	120 max.	ma
MAX.-SIGNAL DC PLATE INPUT* . . . . .	60 max.	90 max.	watts
MAX.-SIGNAL GRID-No.2 INPUT* . . . . .	3.5 max.	3.5 max.	watts
PLATE DISSIPATION* . . . . .	25 max.	30 max.	watts
<b>PEAK HEATER-CATHODE VOLTAGE:</b>			
Heater negative with respect to cathode . . . .	135 max.	135 max.	volts
Heater positive with respect to cathode . . . .	135 max.	135 max.	volts

• Subscript 1 indicates that grid-No.1 current does not flow during any part of the input cycle.

• In class AB<sub>1</sub> service, the normal design limitation is the requirement that grid-No.1 current should not flow. For this reason, the typical operating values shown for both CCS and ICAS conditions are the same.

•• The driver stage should be capable of supplying the No.1 grids of the class AB<sub>1</sub> stage with the specified driving voltage at low distortion.

•, ••, \*, ••: See next page.

→ indicates a change.



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## BEAM POWER TUBE

Typical Operation:	CCS*			ICAS**	
	Values are for 2 tubes				
DC Plate Voltage . . . . .	400	500	600	750	volts
DC Grid-No.2 Voltage** . . . . .	300	300	300	300	volts
DC Grid-No.1 (Control-Grid) Voltage:					
From fixed-bias source . . . . .	-30	-32	-34	-35	volts
Peak AF Grid-No.1-to-Grid-No.1 Voltage. . . . .	60	64	68	70	volts
Zero-Signal DC Plate Current. . . . .	56	44	36	30	ma
Max.-Signal DC Plate Current. . . . .	143	141	139	139	ma
Zero-Signal DC Grid-No.2 Current. . . . .	2	1	0.6	0.5	ma
Max.-Signal DC Grid-No.2 Current. . . . .	16	15	15	16	ma
Effective Load Resistance (Plate to plate) . . . . .	6800	8200	10000	12000	ohms
Max.-Signal Driving Power (Approx.) . . . . .	0	0	0	0*	watts
Max.-Signal Power Output (Approx.) . . . . .	36	46	56	72	watts

## Maximum Circuit Values (CCS or ICAS):

Grid-No.1-Circuit Resistance: <sup>00</sup>	
With fixed bias . . . . .	0.1 max. megohm
With cathode bias . . . . .	Not recommended

AF POWER AMPLIFIER & MODULATOR - Class AB<sub>2</sub><sup>#</sup>

## Maximum Ratings, Absolute Values:

	CCS*	ICAS**
DC PLATE VOLTAGE . . . . .	600 max.	750 max. volts
DC GRID-No.2 (SCREEN) VOLTAGE . . . . .	300 max.	300 max. volts
MAX.-SIGNAL DC PLATE CURRENT* . . . . .	120 max.	120 max. ma
MAX.-SIGNAL PLATE INPUT* . . . . .	60 max.	90 max. watts
MAX.-SIGNAL GRID-No.2 INPUT* . . . . .	3.5 max.	3.5 max. watts
PLATE DISSIPATION* . . . . .	25 max.	30 max. watts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode . . . . .	135 max.	135 max. volts
Heater positive with respect to cathode . . . . .	135 max.	135 max. volts

\* Subscript 2 indicates that the grid-No.1 current flows during some part of the input cycle.

\* Averaged over any audio-frequency cycle of sine-wave form.

•, ••, \*\*, <sup>00</sup>: See next page.

← Indicates a change.



# BEAM POWER TUBE

Typical Operation:	CCS*			ICAS**	
	Values are for 2 tubes				
DC Plate Voltage . . . . .	400	500	600	750	volts
DC Grid-No.2 Voltage** . . . . .	300	300	300	300	volts
DC Grid-No.1 (Control-Grid) Voltage:					
From fixed-bias source . . . . .	-28	-30	-32	-35	volts
Peak AF Grid-No.1-to-Grid-No.1 Voltage. . . . .	80	86	90	96	volts
Zero-Signal DC Plate Current. . . . .	72	60	48	30	ma
Max.-Signal DC Plate Current. . . . .	240	240	200	240	ma
Zero-Signal DC Grid-No.2 Current. . . . .	2	0.9	0.7	0.5	ma
Max.-Signal DC Grid-No.2 Current. . . . .	20	20	18	20	ma
Effective Load Resistance (Plate to plate) . . . . .	3700	4600	6900	7300	ohms
Max.-Signal Driving Power (Approx.)♦♦ . . . . .	0.2	0.2	0.1	0.2	watt
Max.-Signal Power Output (Approx.)▲ . . . . .	55	75	80	120	watts

## Maximum Circuit Values (CCS or ICAS):

Grid-No.1-Circuit Resistance:°°

With fixed bias. . . . .	30000 max.	ohms
With cathode bias. . . . .	Not recommended	

## RF POWER AMPLIFIER-Class B Telephony

Carrier conditions per tube for use with a max. modulation factor of 1.0

## Maximum Ratings, Absolute Values:

	CCS*	ICAS**
DC PLATE VOLTAGE . . . . .	600 max.	750 max. volts
DC GRID-No.2 (SCREEN) VOLTAGE . . . . .	300 max.	300 max. volts
DC PLATE CURRENT . . . . .	80 max.	90 max. ma
PLATE INPUT. . . . .	37.5 max.	45 max. watts
GRID-No.2 INPUT. . . . .	2.5 max.	2.5 max. watts

\*\* Preferably obtained from a separate source, or from the plate-voltage supply with a voltage divider.

♦♦ Driver stage should be capable of supplying the specified driving power at low distortion to the No.1 grids of the class AB<sub>2</sub> stage. The effective resistance per grid-No.1 circuit of the class AB<sub>2</sub> stage should be kept below 500 ohms and the effective impedance should not exceed 700 ohms at the highest response frequency.

▲ With zero-impedance driver and perfect regulation, plate-circuit distortion does not exceed 2%. In practice, the regulation of the plate-voltage, grid-No.2 voltage, and grid-No.1 voltage should not be greater than 5%, 5%, and 3%, respectively.

•, ••, °°: See next page.

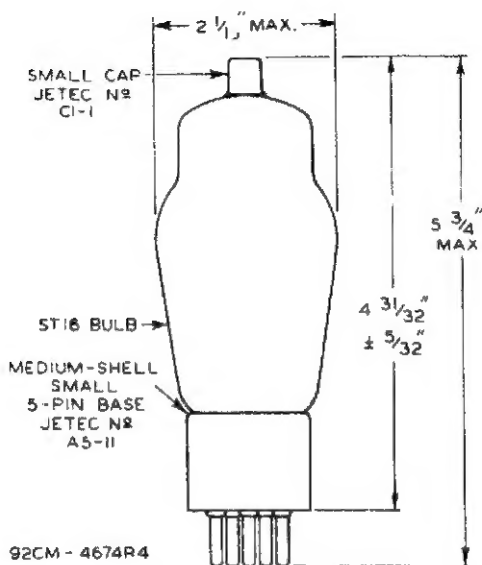
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# BEAM POWER TUBE

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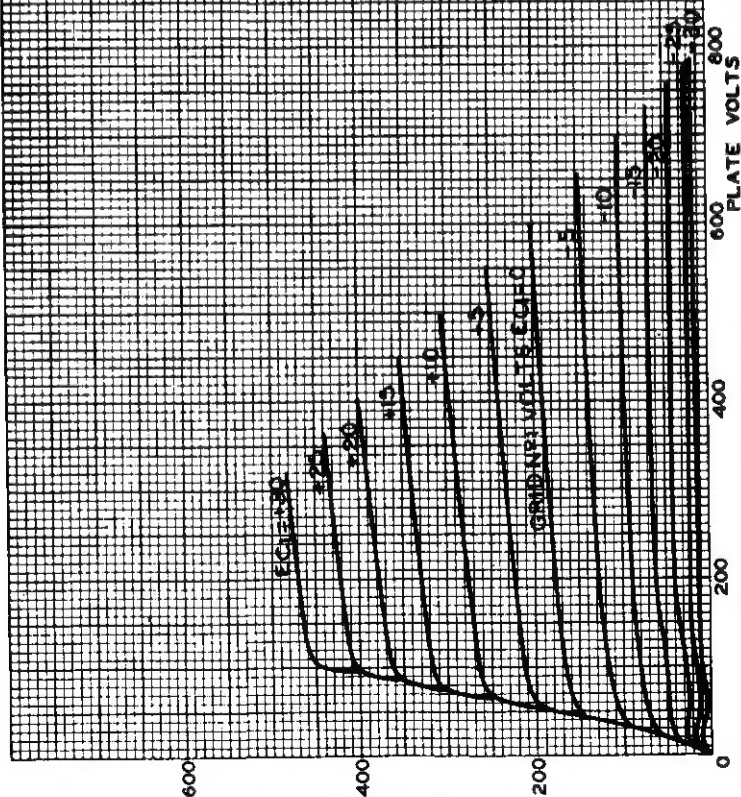




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## AVERAGE PLATE CHARACTERISTICS

$E_f = 6.3$  VOLTS  
GRID-№2 VOLTS = 250

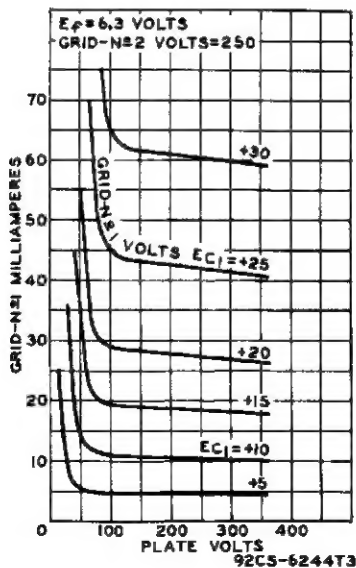
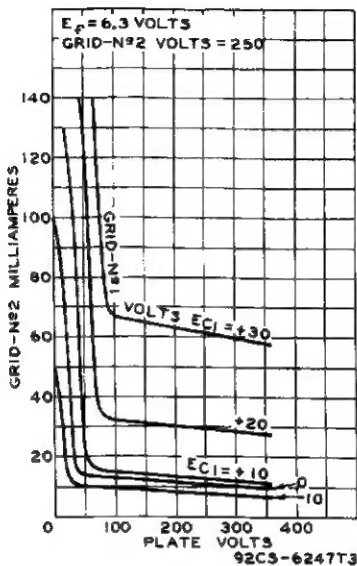




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## AVERAGE CHARACTERISTICS

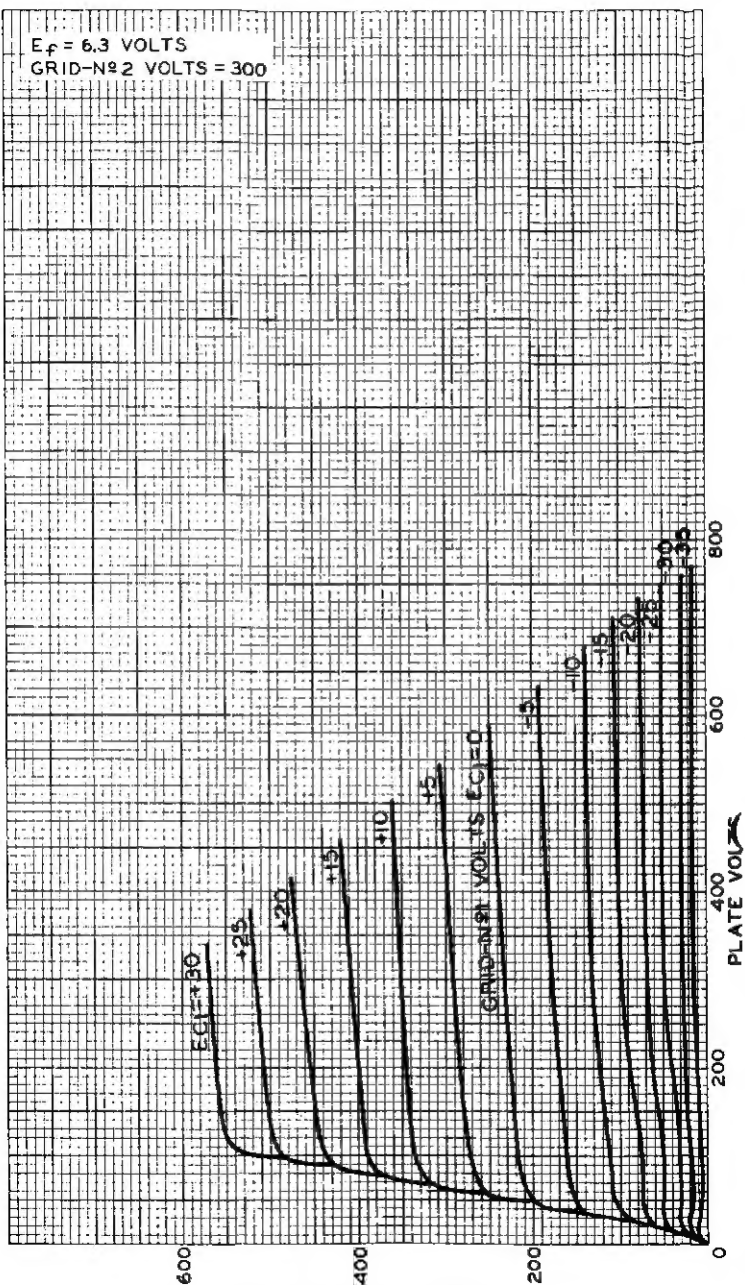




## AVERAGE PLATE CHARACTERISTICS

 $E_f = 6.3$  VOLTS

GRID-No 2 VOLTS = 300



ELECTRON TUBE DIVISION

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-4682R3

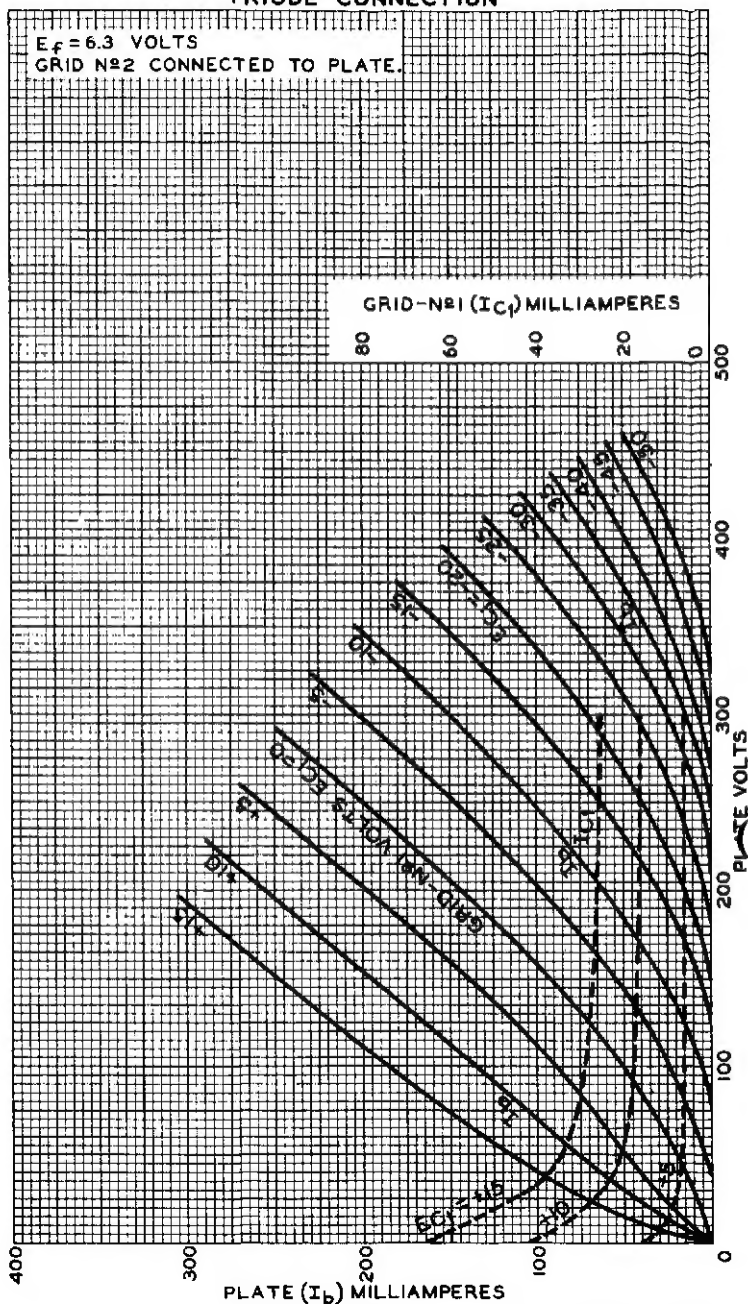


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# AVERAGE CHARACTERISTICS TRIODE CONNECTION

 $E_f = 6.3$  VOLTSGRID N<sup>o</sup>2 CONNECTED TO PLATE.PLATE ( $I_b$ ) MILLIAMPERES

ELECTRON TUBE DIVISION

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

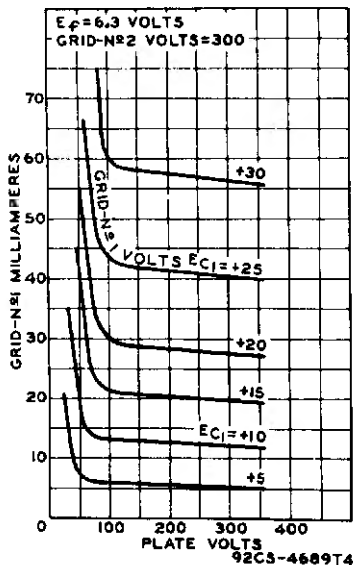
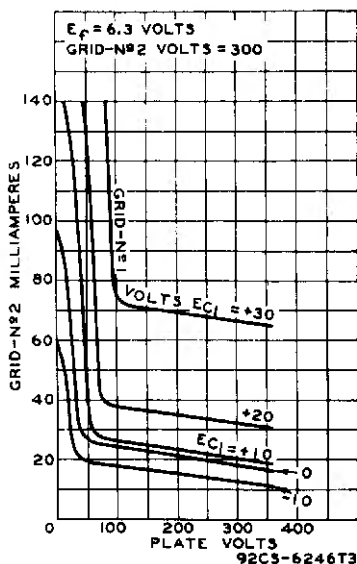
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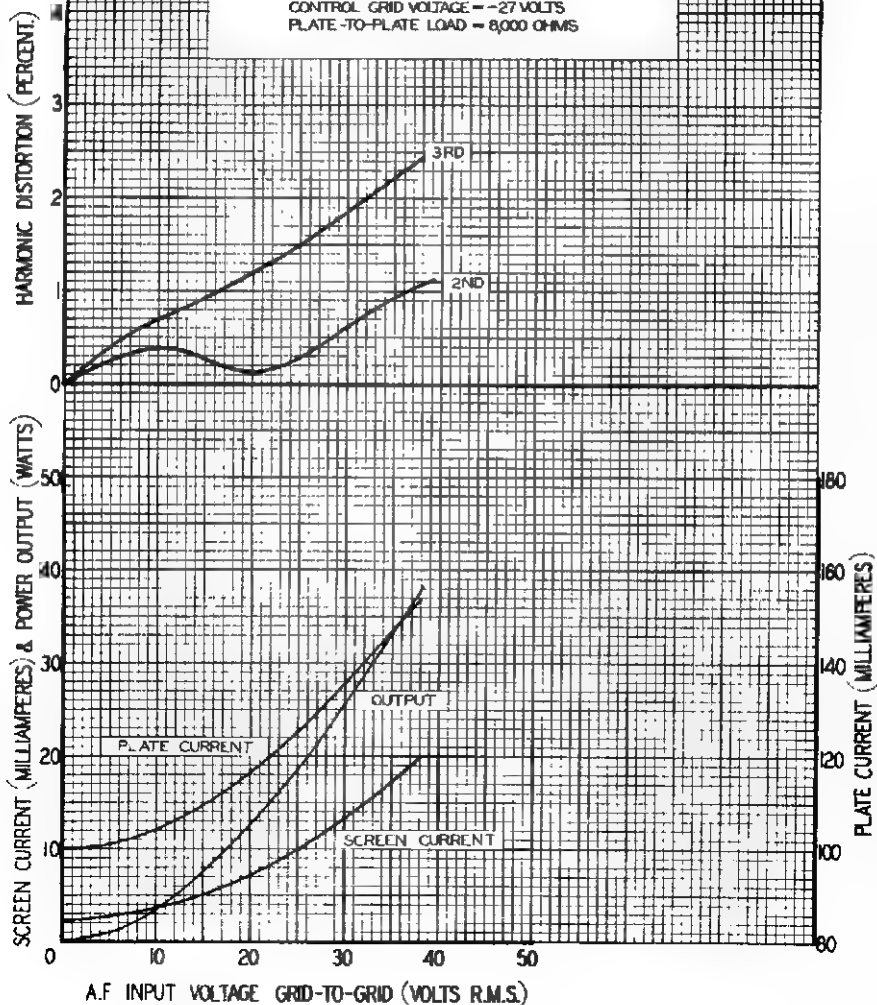
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## AVERAGE CHARACTERISTICS



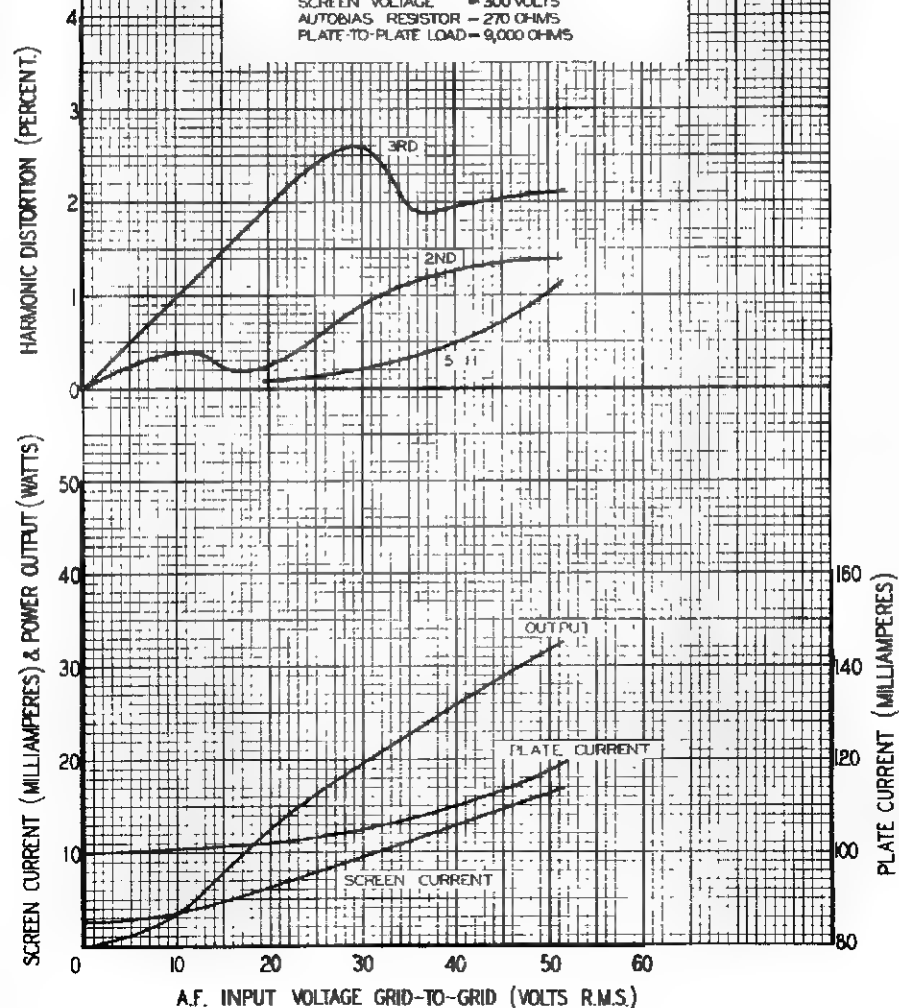
VALVE TYPE 807  
 PUSH-PULL CLASS "AB," AMPLIFIER  
 POWER OUTPUT, DISTORTION, SCREEN CURRENT  
 & PLATE CURRENT VERSUS  
 A.F. INPUT VOLTAGE

PLATE VOLTAGE — 500 VOLTS  
 SCREEN VOLTAGE — 300 VOLTS  
 CONTROL GRID VOLTAGE — -27 VOLTS  
 PLATE-TO-PLATE LOAD — 8,000 OHMS



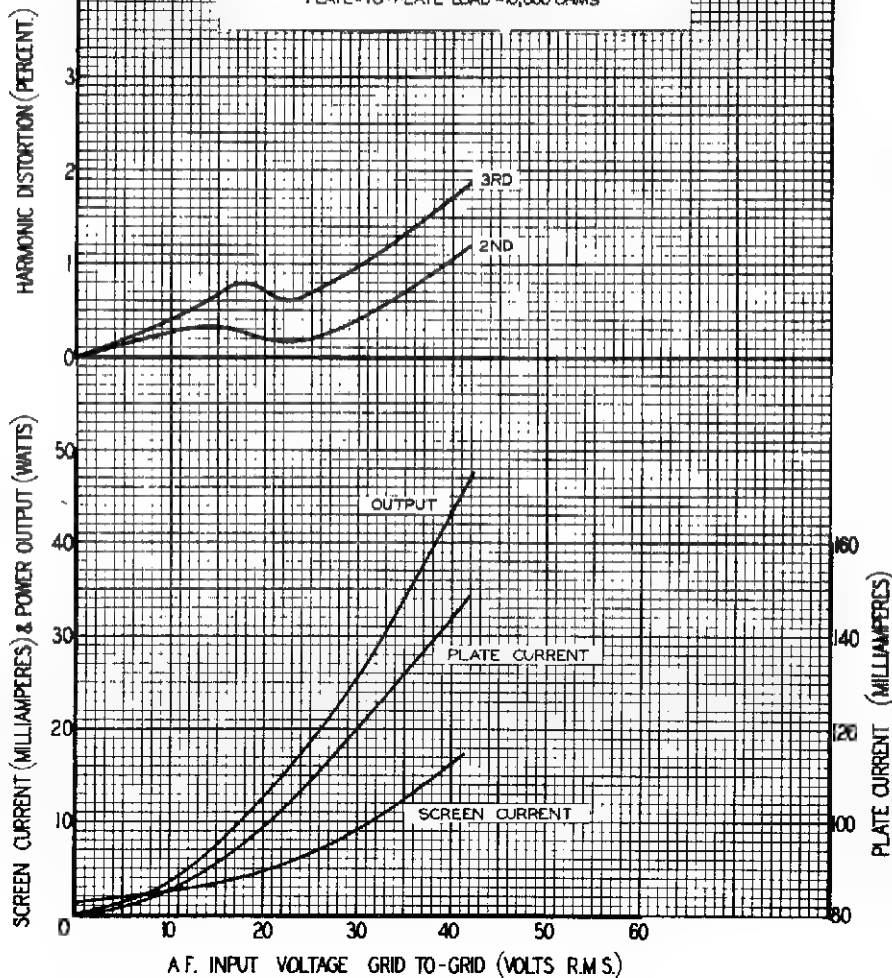
VALVE TYPE 807  
 PUSH-PULL CLASS "AB<sub>1</sub>" AMPLIFIER  
 POWER OUTPUT, DISTORTION, SCREEN CURRENT  
 & PLATE CURRENT VERSUS  
 A.F. INPUT VOLTAGE

PLATE VOLTAGE = 500 VOLTS  
 SCREEN VOLTAGE = 300 VOLTS  
 AUTOBIAS RESISTOR = 270 OHMS  
 PLATE-TO-PLATE LOAD = 9,000 OHMS



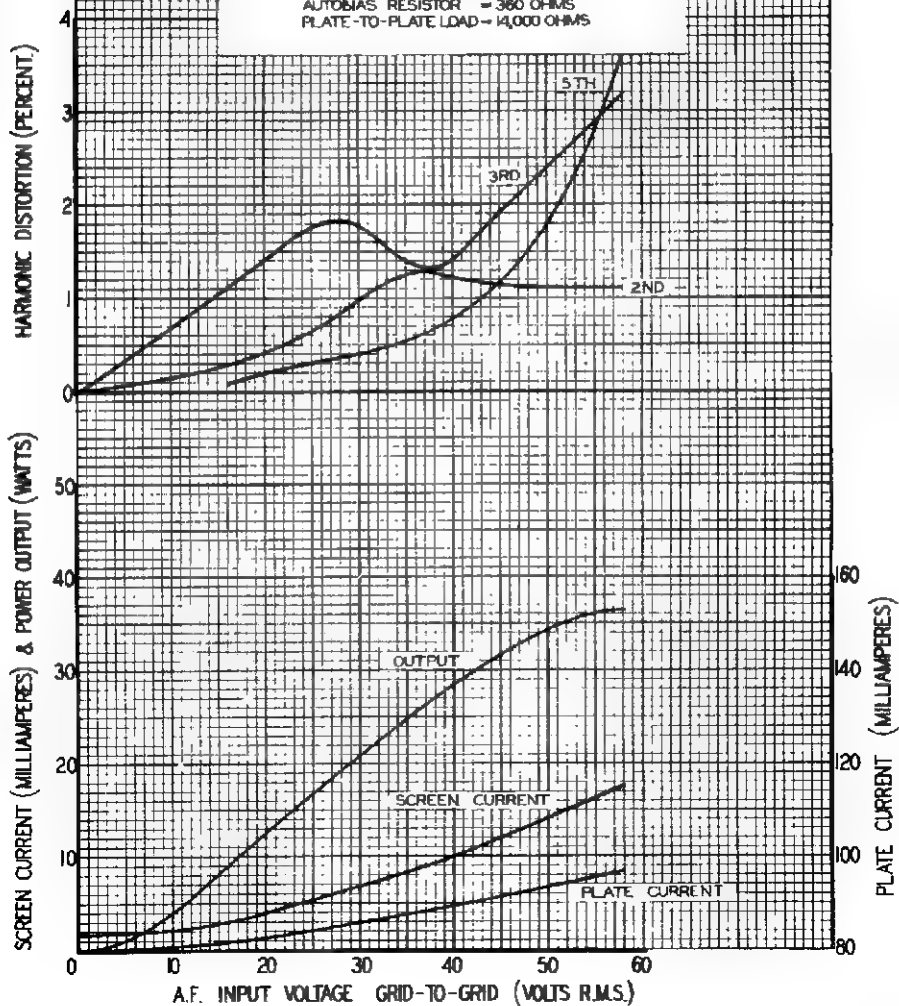
VALVE TYPE 807  
PUSH-PULL CLASS 'AB<sub>1</sub>' AMPLIFIER  
POWER OUTPUT, DISTORTION, SCREEN CURRENT  
& PLATE CURRENT VERSUS  
A.F. INPUT VOLTAGE

PLATE VOLTAGE = 800 VOLTS  
SCREEN VOLTAGE = 300 VOLTS  
CONTROL GRID VOLTAGE = -29.5 VOLTS  
PLATE-TO-PLATE LOAD = 10,000 OHMS

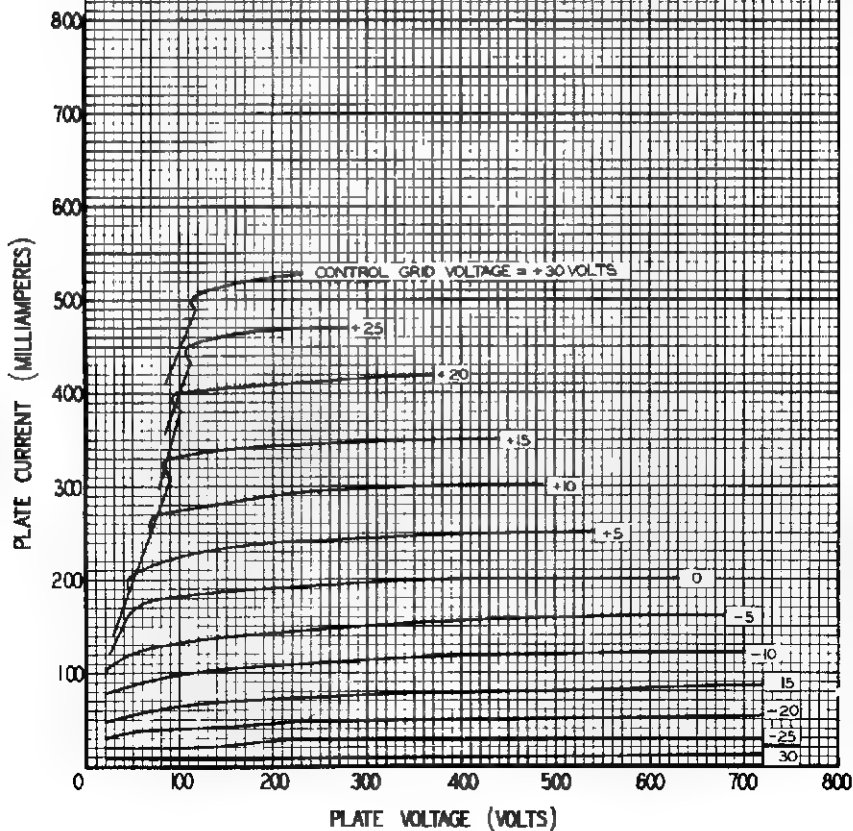


VALVE TYPE 807  
 PUSH-PULL CLASS "AB<sub>1</sub>" AMPLIFIER  
 POWER OUTPUT, DISTORTION, SCREEN CURRENT  
 & PLATE CURRENT VERSUS  
 A.F. INPUT VOLTAGE

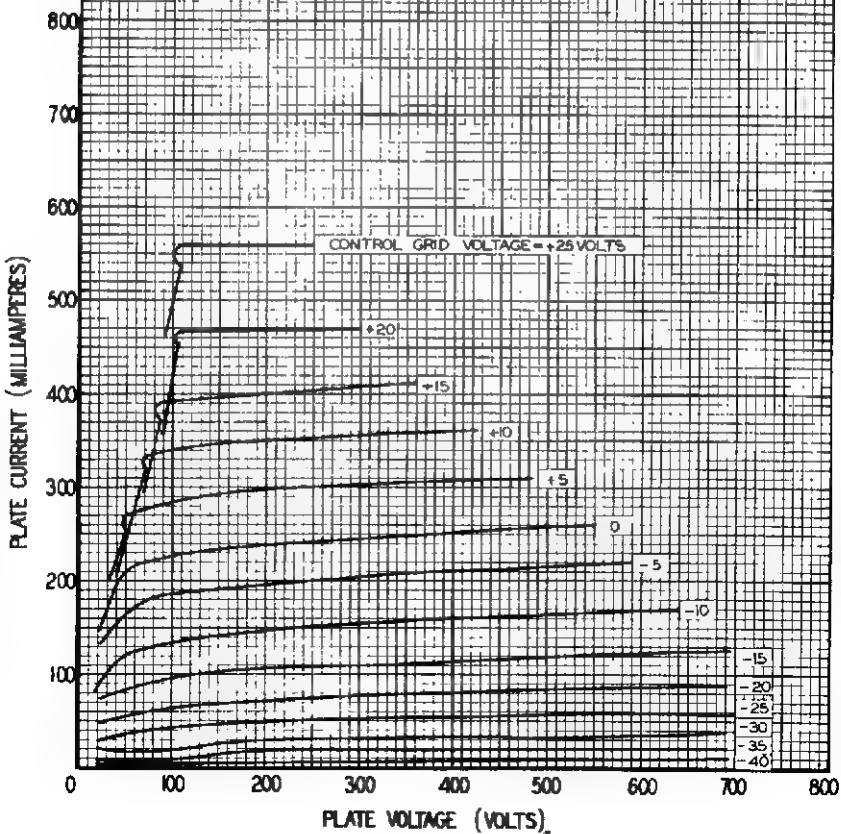
PLATE VOLTAGE = 600 VOLTS  
 SCREEN VOLTAGE = 300 VOLTS  
 AUTOBIAS RESISTOR = 360 OHMS  
 PLATE-TO-PLATE LOAD = 14,000 OHMS



VALVE TYPE 807  
PLATE CURRENT VERSUS PLATE VOLTAGE  
SCREEN VOLTAGE = 250 VOLTS

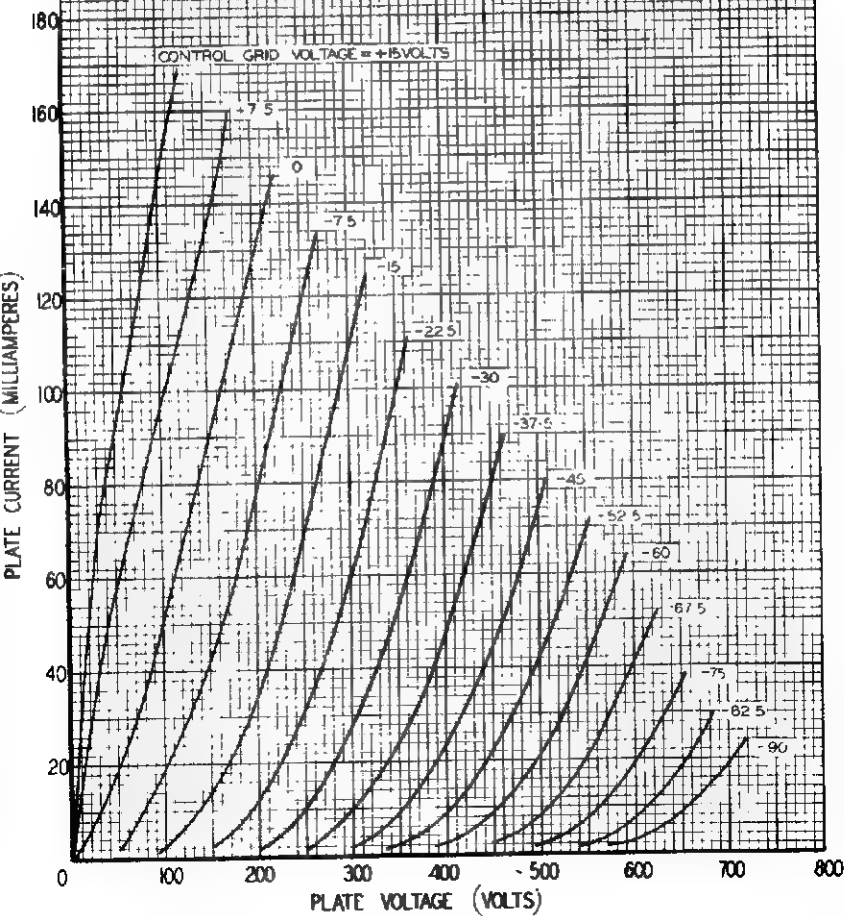


VALVE TYPE 807  
PLATE CURRENT VERSUS PLATE VOLTAGE  
SCREEN VOLTAGE = 300 VOLTS

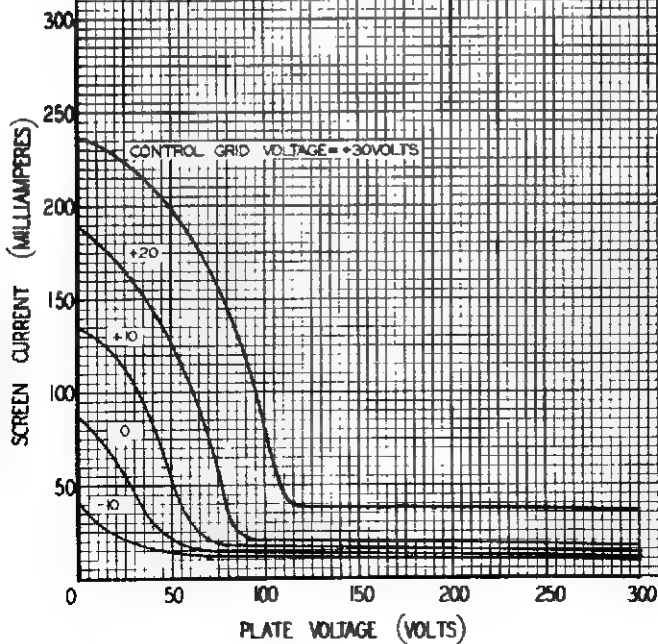




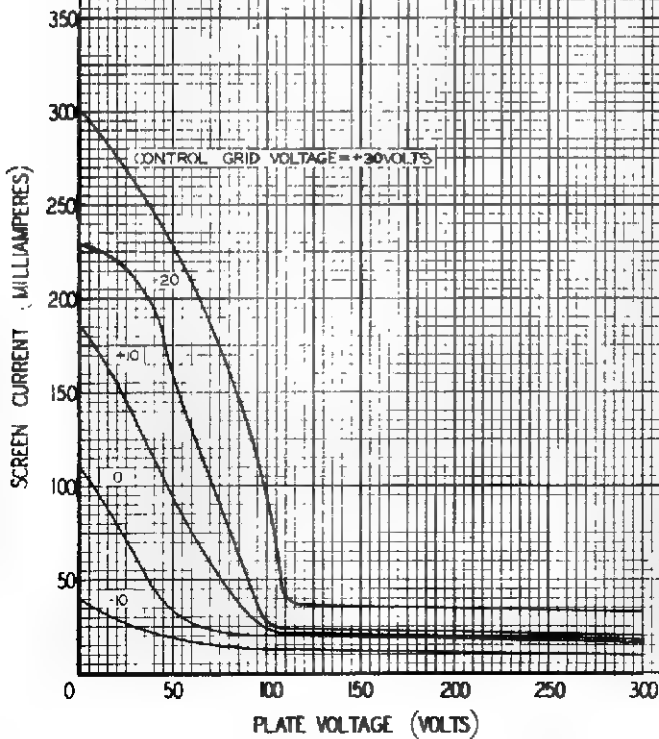
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TRIODE CONNECTION  
PLATE CURRENT VERSUS PLATE VOLTAGE



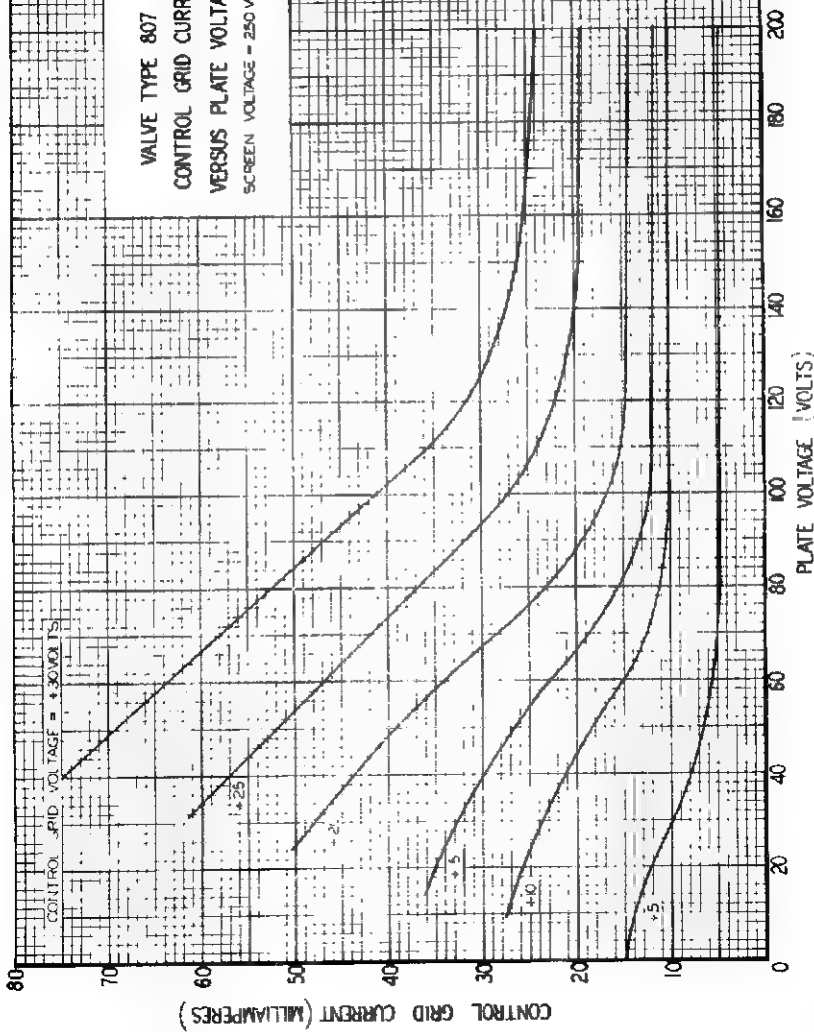
VALVE TYPE 807  
SCREEN CURRENT VERSUS PLATE VOLTAGE  
SCREEN VOLTAGE = 250 VOLTS



VALVE TYPE 807  
SCREEN CURRENT VERSUS PLATE VOLTAGE  
SCREEN VOLTAGE = 300 VOLTS



VALVE TYPE 807  
CONTROL GRID CURRENT  
VERSUS PLATE VOLTAGE  
SCREEN VOLTAGE = 250 VOLTS

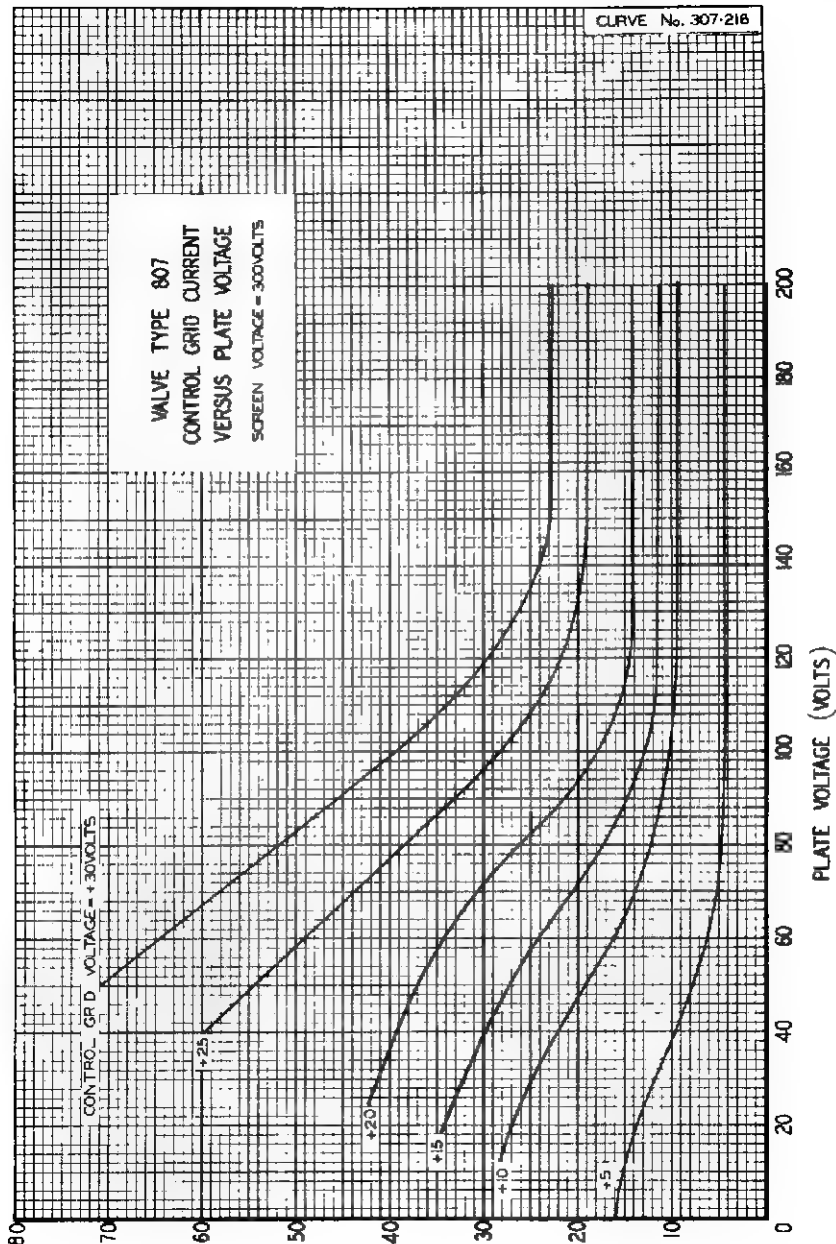


VALVE TYPE 807  
CONTROL GRID CURRENT  
VERSUS PLATE VOLTAGE  
SCREEN VOLTAGE = 300VOLTS

CONTROL GRID VOLTAGE = +30VOLTS

CONTROL GRID CURRENT (MILLIAMPERES)

PLATE VOLTAGE (VOLTS)



VALVE TYPE 807  
 PUSH-PULL CLASS "AB<sub>2</sub>" AMPLIFIER  
 POWER OUTPUT, DISTORTION, SCREEN CURRENT  
 & PLATE CURRENT VERSUS  
 A.F. INPUT VOLTAGE

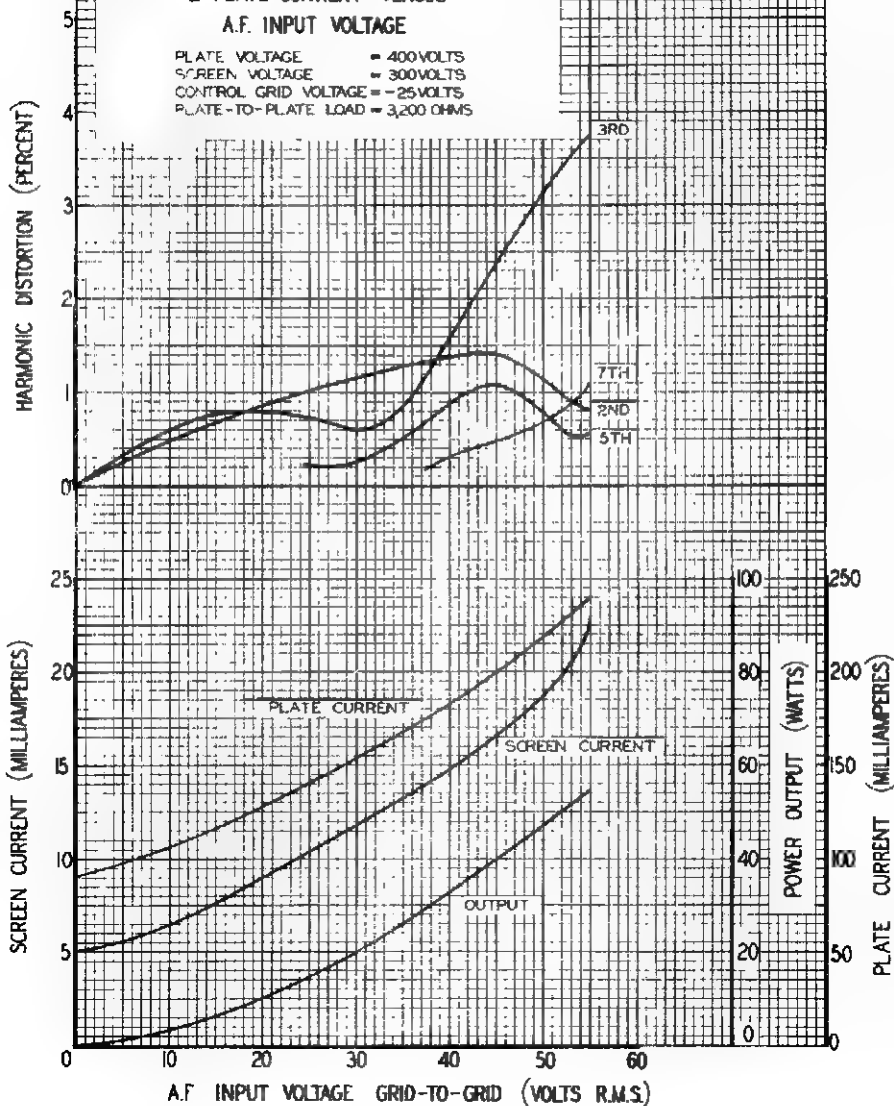
PLATE VOLTAGE = 400 VOLTS  
 SCREEN VOLTAGE = 300 VOLTS  
 CONTROL GRID VOLTAGE = -25 VOLTS  
 PLATE-TO-PLATE LOAD = 3,200 OHMS

HARMONIC DISTORTION (PERCENT)

SCREEN CURRENT (MILLIAMPERES)

POWER OUTPUT (WATTS)

PLATE CURRENT (MILLIAMPERES)

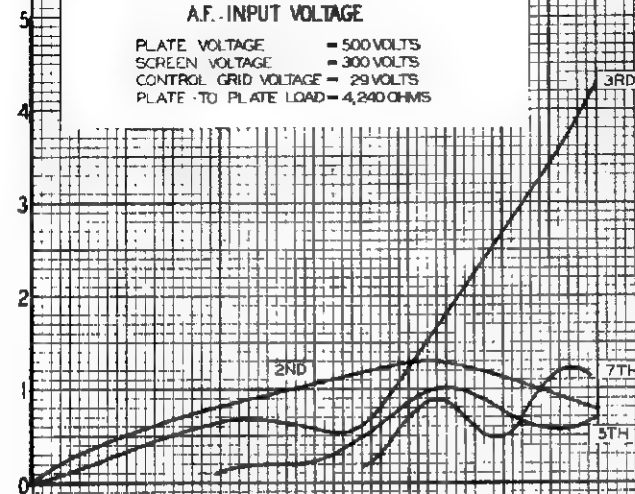


A.F. INPUT VOLTAGE GRID-TO-GRID (VOLTS R.M.S.)

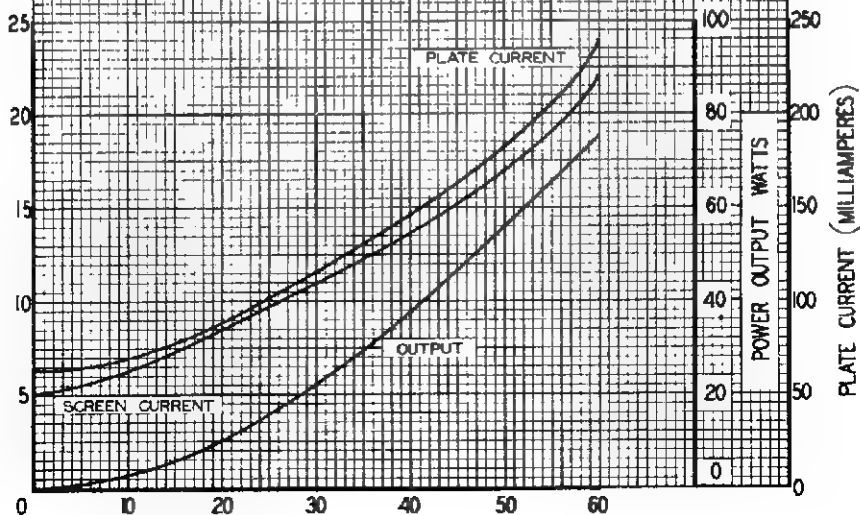
VALVE TYPE 807  
 PUSH-PULL CLASS "AB<sub>2</sub>" AMPLIFIER  
 POWER OUTPUT, DISTORTION, SCREEN CURRENT  
 & PLATE CURRENT VERSUS  
 A.F. INPUT VOLTAGE

PLATE VOLTAGE = 500 VOLTS  
 SCREEN VOLTAGE = 300 VOLTS  
 CONTROL GRID VOLTAGE = -29 VOLTS  
 PLATE TO PLATE LOAD = 4,240 OHMS

HARMONIC DISTORTION (PERCENT)



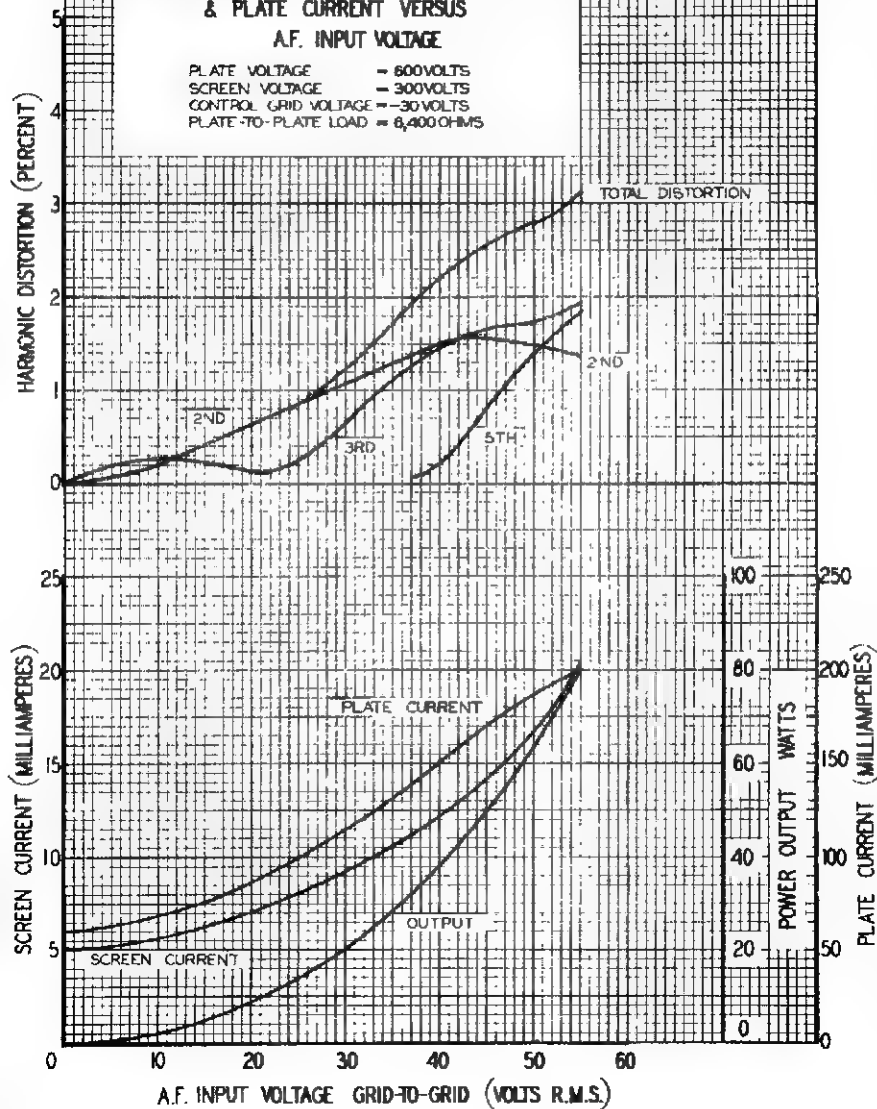
SCREEN CURRENT (MILLIAMPERES)



A.F. INPUT VOLTAGE GRID-TO-GRID (VOLTS R.M.S.)

VALVE TYPE 807  
 PUSH-PULL CLASS "AB<sub>1</sub>" AMPLIFIER  
 POWER OUTPUT, DISTORTION, SCREEN CURRENT  
 & PLATE CURRENT VERSUS  
 A.F. INPUT VOLTAGE

PLATE VOLTAGE = 600 VOLTS  
 SCREEN VOLTAGE = 300 VOLTS  
 CONTROL GRID VOLTAGE = -30 VOLTS  
 PLATE-TO-PLATE LOAD = 8,400 OHMS

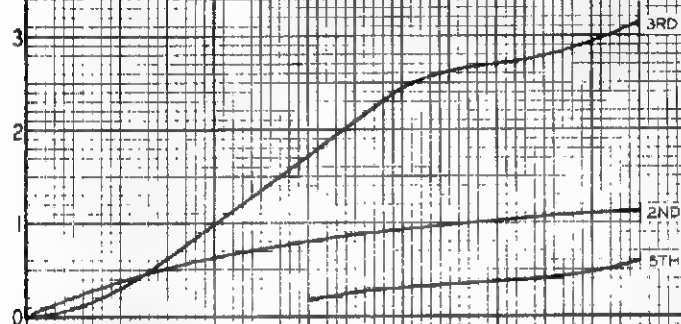




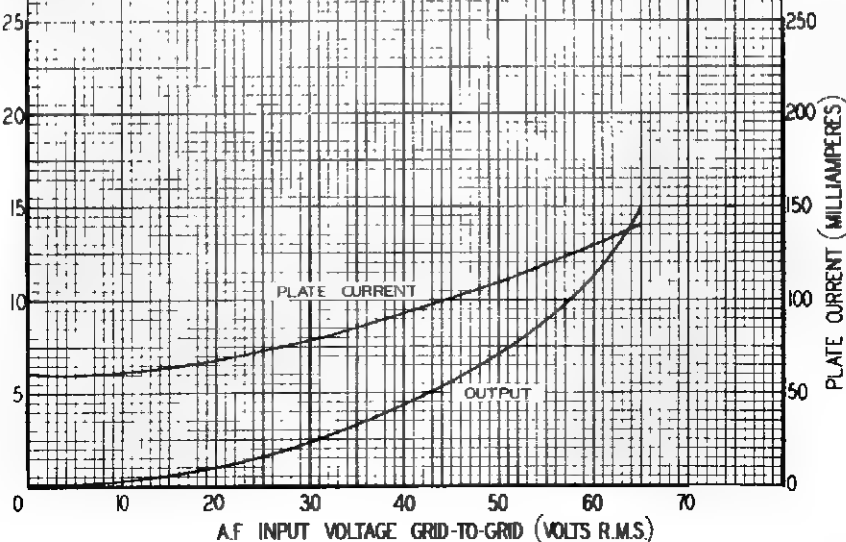
VALVE TYPE 807  
TRIODE CONNECTION  
PUSH-PULL CLASS "AB<sub>1</sub>" AMPLIFIER  
POWER OUTPUT, DISTORTION & PLATE CURRENT  
VERSUS A.F. INPUT VOLTAGE

PLATE VOLTAGE = 400 VOLTS  
CONTROL GRID VOLTAGE = -45 VOLTS  
PLATE TO PLATE LOAD = 3,000 OHMS

HARMONIC DISTORTION (PERCENT)

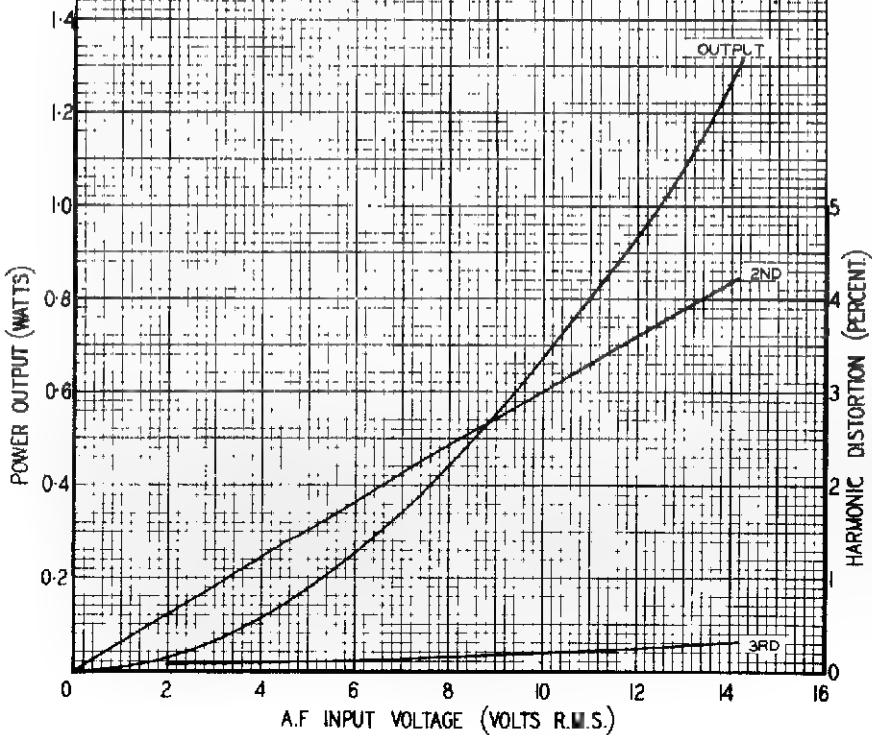


POWER OUTPUT (WATTS)



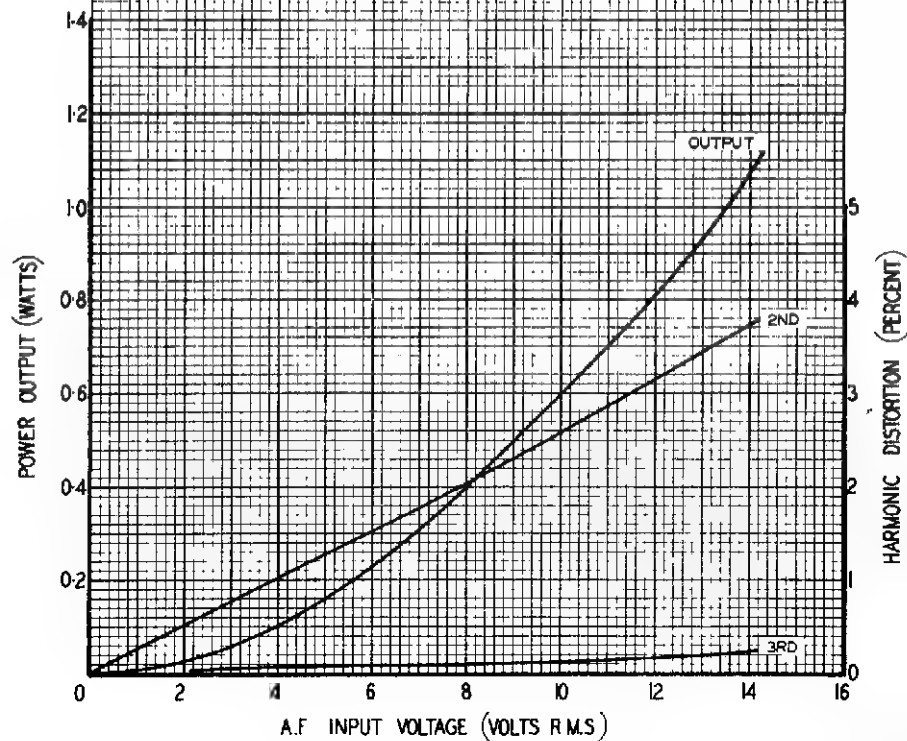
VALVE TYPE 807  
TRIODE CONNECTION  
CLASS "A" AMPLIFIER  
POWER OUTPUT & DISTORTION  
VERSUS A.F. INPUT VOLTAGE

PLATE VOLTAGE = 250 VOLTS  
CONTROL GRID VOLTAGE = -20 VOLTS  
PLATE CURRENT = 40-44 mA  
PLATE LOAD = 5,000 OHMS



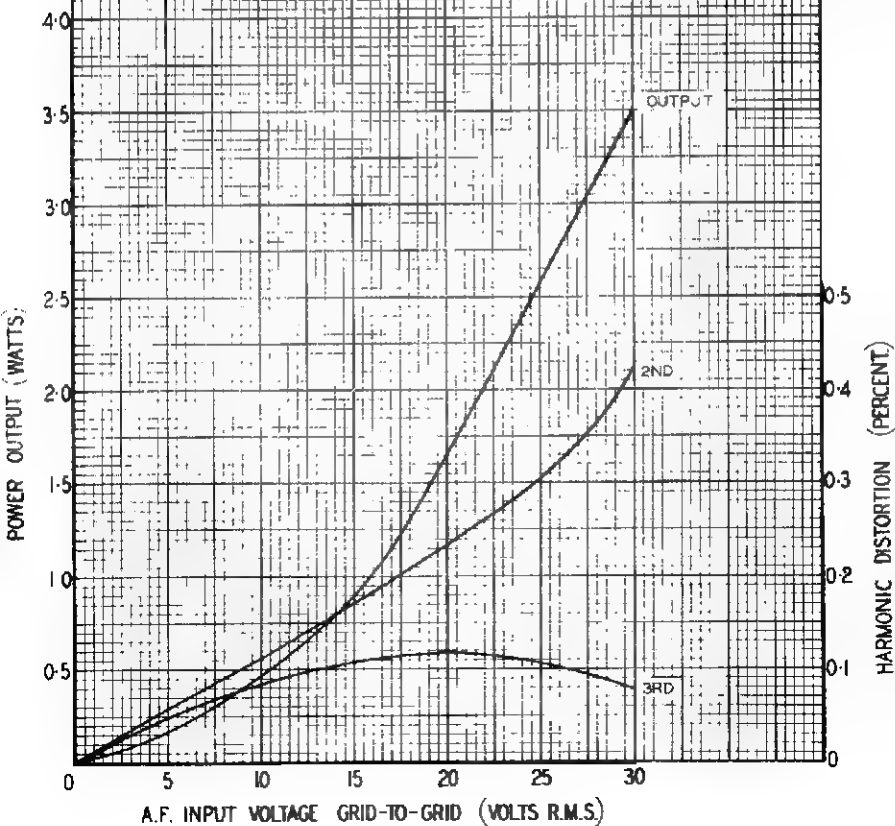
VALVE TYPE 807  
TRIODE CONNECTION  
CLASS 'A' AMPLIFIER  
POWER OUTPUT & DISTORTION  
VERSUS A.F. INPUT VOLTAGE

PLATE VOLTAGE = 250 VOLTS  
AUTOBIAS RESISTOR = 500 OHMS  
PLATE CURRENT = 40-41 mA  
PLATE LOAD = 6,000 OHMS



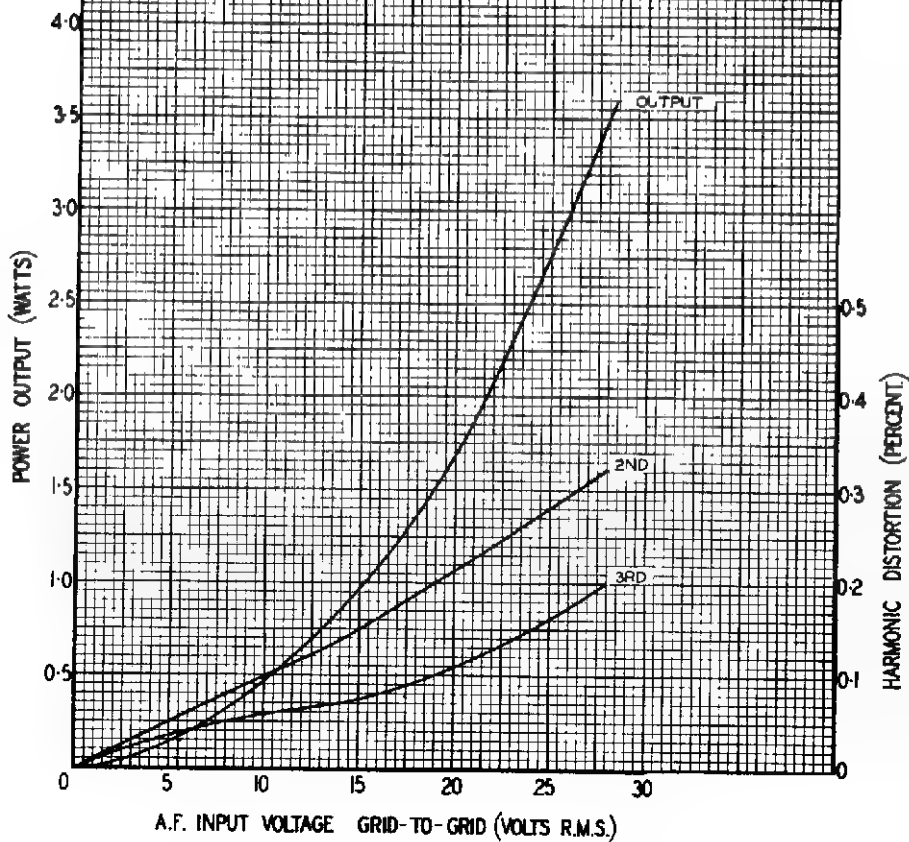
VALVE TYPE 807  
TRIODE CONNECTION  
PUSH-PULL CLASS 'A' AMPLIFIER  
POWER OUTPUT & DISTORTION  
VERSUS A.F. INPUT VOLTAGE

PLATE VOLTAGE = 250 VOLTS  
AUTOBIAS RESISTOR = 250 OHMS  
PLATE CURRENT = 80-84 mA  
PLATE-TO-PLATE LOAD = 5,000 OHMS



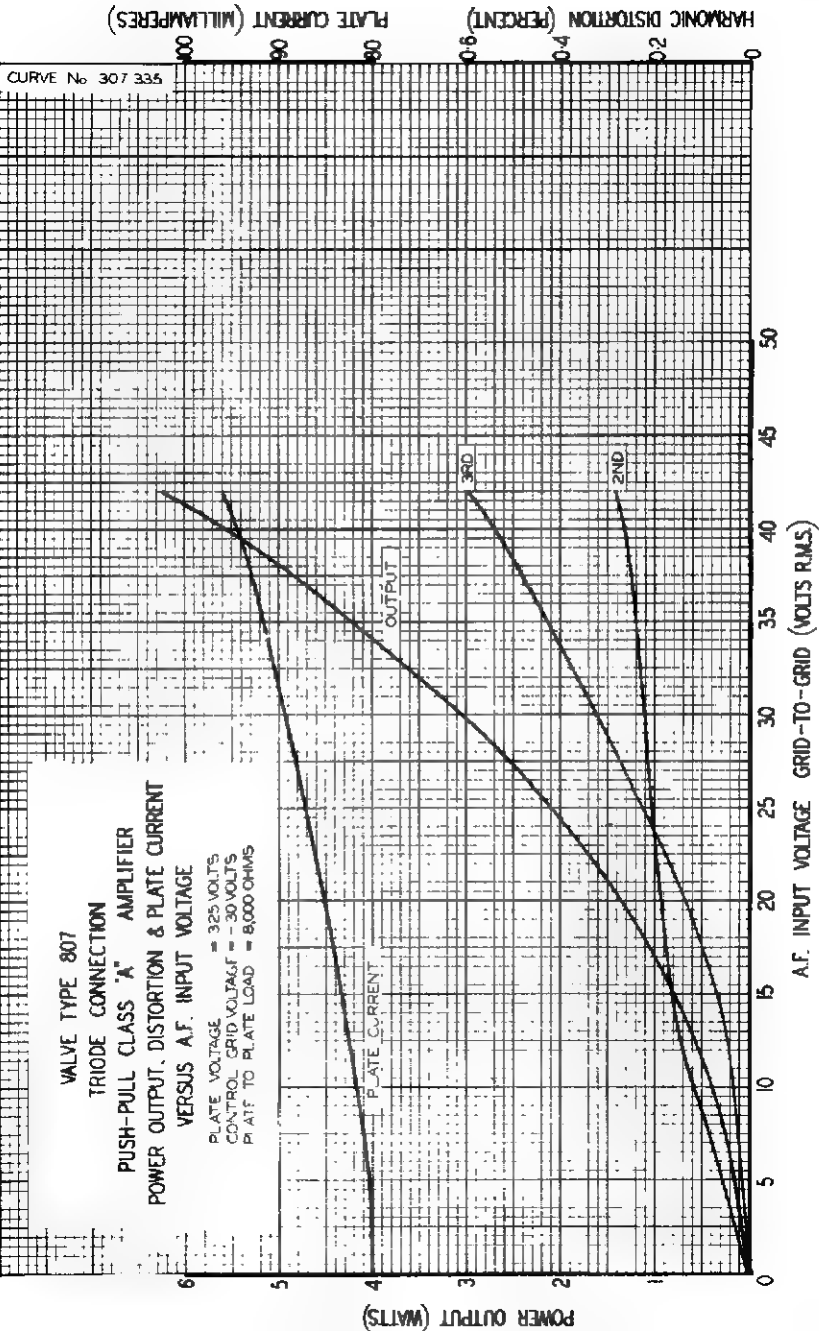
VALVE TYPE 807  
TRIODE CONNECTION  
PUSH-PULL CLASS "A" AMPLIFIER  
POWER OUTPUT & DISTORTION  
VERSUS A.F. INPUT VOLTAGE

PLATE VOLTAGE = 250 VOLTS  
CONTROL GRID VOLTAGE = -20 VOLTS  
PLATE CURRENT = 80-88mA  
PLATE-TO-PLATE LOAD = 5,000 OHMS



VALVE TYPE 807  
TRIODE CONNECTION  
PUSH-PULL CLASS "A" AMPLIFIER  
POWER OUTPUT, DISTORTION & PLATE CURRENT  
VERSUS A.F. INPUT VOLTAGE

PLATE VOLTAGE = 325 VOLTS  
CONTROL GRID VOLTAGE = -30 VOLTS  
PLATE TO PLATE LOAD = 8,000 OHMS



VALVE TYPE 807  
 TRIODE CONNECTION  
 PUSH-PULL CLASS "A" AMPLIFIER  
 POWER OUTPUT & DISTORTION  
 VERSUS A.F. INPUT VOLTAGE  
 PLATE VOLTAGE = 325 VOLTS  
 AUTOBIAS RESISTOR = 375 OHMS  
 PLATE CURRENT = 80-84 mA  
 PLATE-TO-PLATE LOAD = 8,000 OHMS

OUTPUT

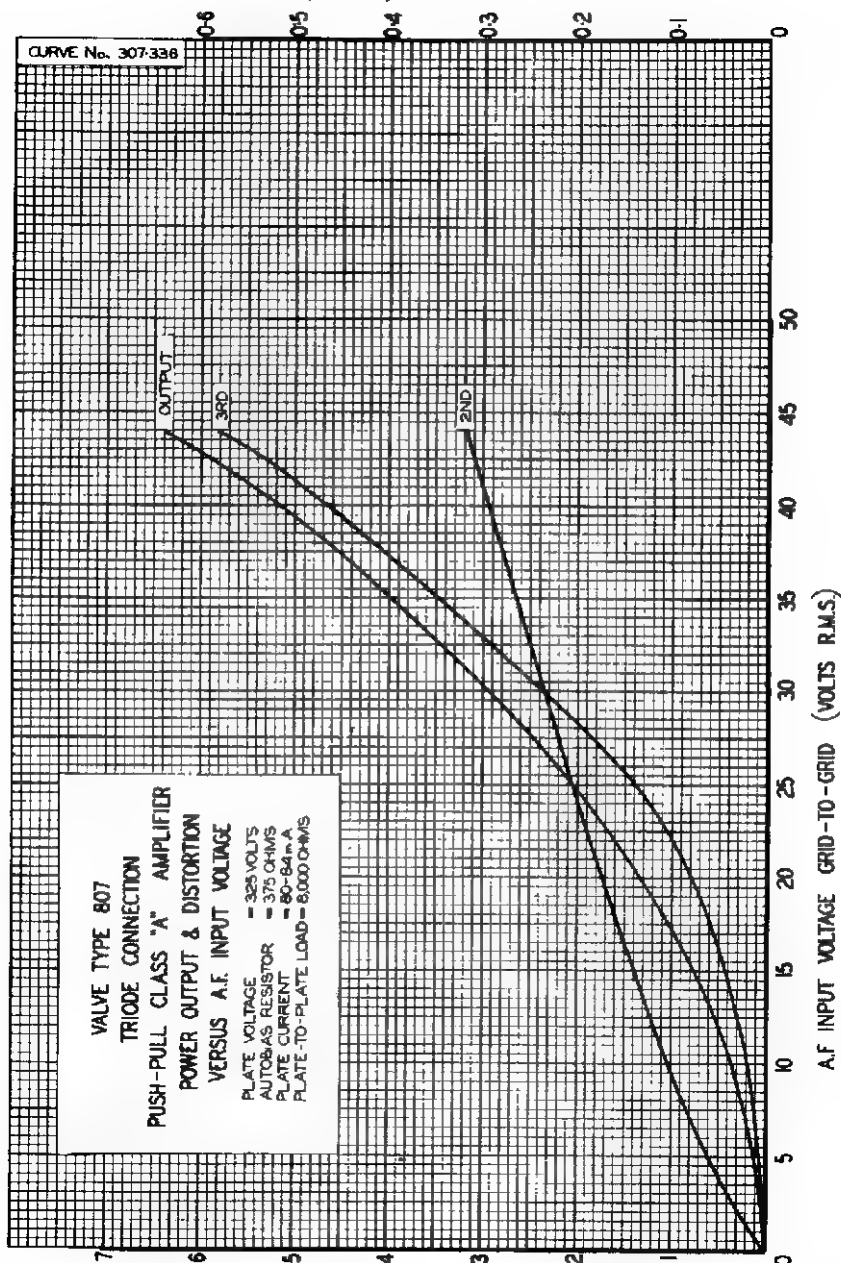
3RD

2ND

POWER OUTPUT (WATTS)

HARMONIC DISTORTION (PERCENT)

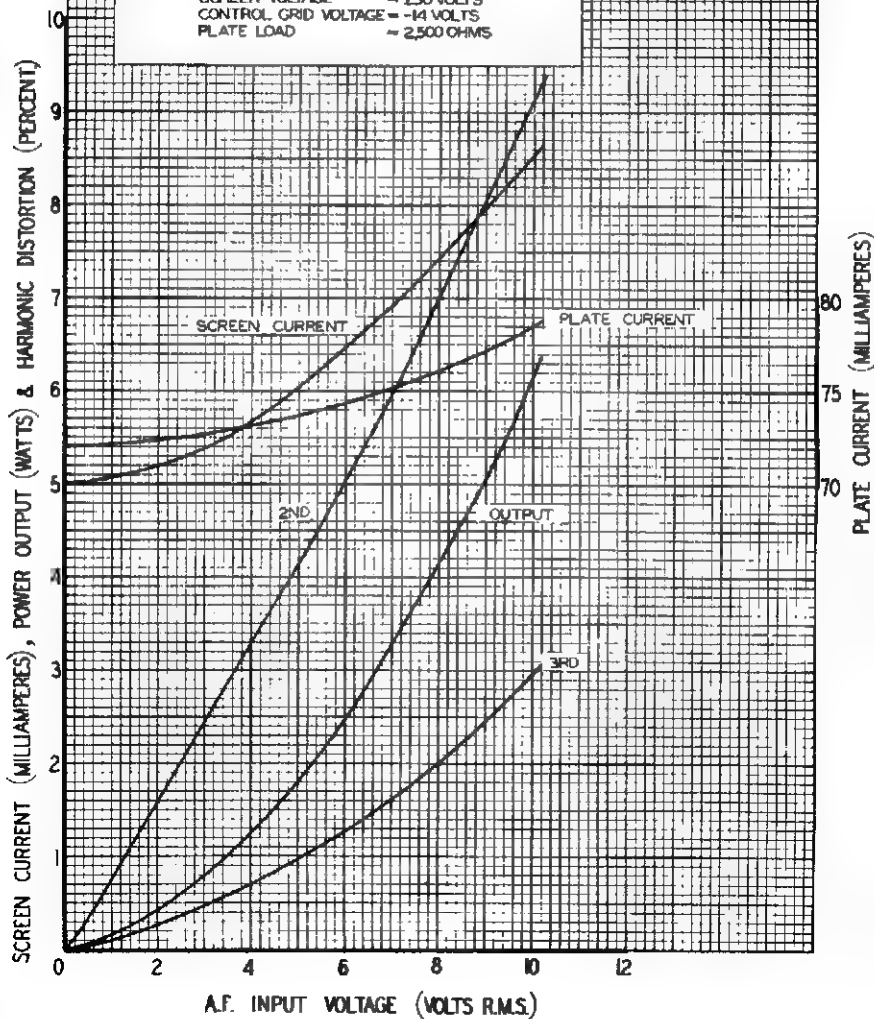
A.F. INPUT VOLTAGE GRID-TO-GRID (VOLTS R.M.S.)



CURVE No. 307-338

VALVE TYPE 807  
 CLASS "A" AMPLIFIER  
 POWER OUTPUT, DISTORTION, SCREEN CURRENT  
 & PLATE CURRENT VERSUS  
 A.F. INPUT VOLTAGE

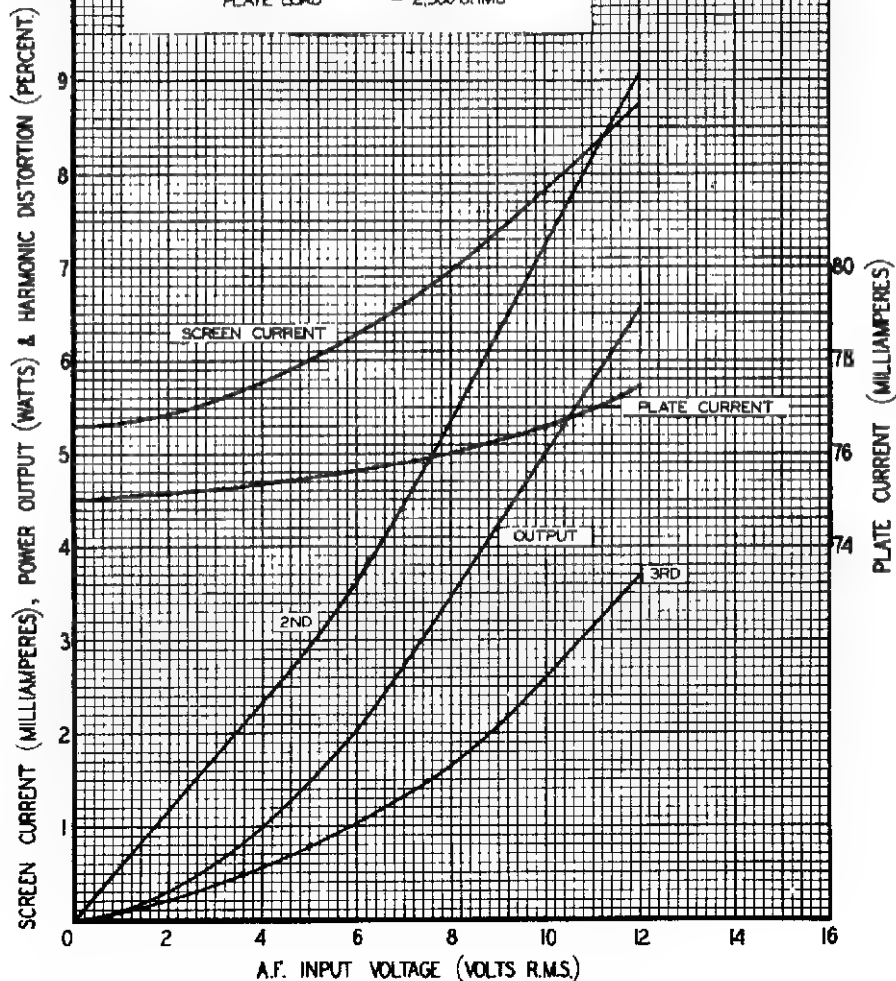
PLATE VOLTAGE = 250 VOLTS  
 SCREEN VOLTAGE = 250 VOLTS  
 CONTROL GRID VOLTAGE = -14 VOLTS  
 PLATE LOAD = 2,500 OHMS





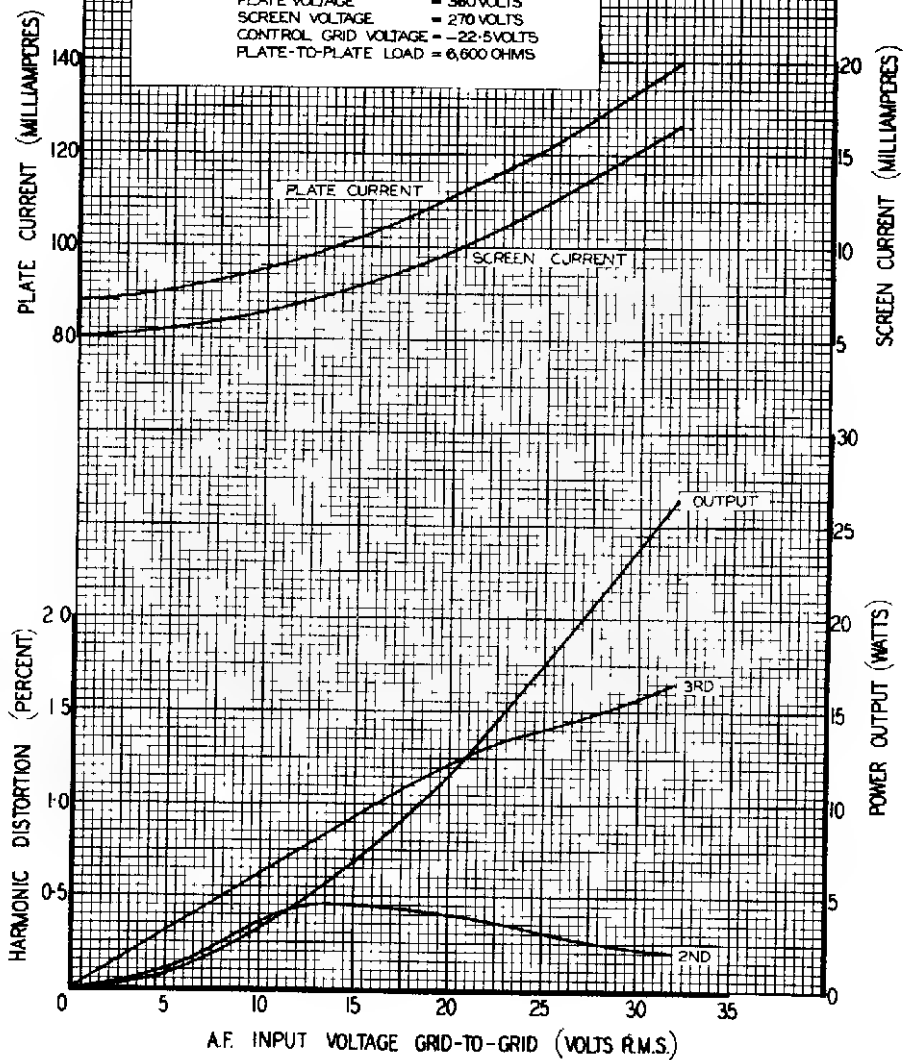
VALVE TYPE 807  
CLASS 'A' AMPLIFIER  
POWER OUTPUT, DISTORTION, SCREEN CURRENT  
& PLATE CURRENT VERSUS  
A.F. INPUT VOLTAGE

PLATE VOLTAGE = 250 VOLTS  
SCREEN VOLTAGE = 250 VOLTS  
AUTOBIAS RESISTOR = 170 OHMS  
PLATE LOAD = 2,500 OHMS



VALVE TYPE 807  
 PUSH-PULL CLASS "AB<sub>1</sub>" AMPLIFIER  
 POWER OUTPUT, DISTORTION, SCREEN CURRENT  
 & PLATE CURRENT VERSUS  
 A.F. INPUT VOLTAGE

PLATE VOLTAGE = 360 VOLTS  
 SCREEN VOLTAGE = 270 VOLTS  
 CONTROL GRID VOLTAGE = -22.5 VOLTS  
 PLATE-TO-PLATE LOAD = 6,600 OHMS



# VALVE TYPE 807

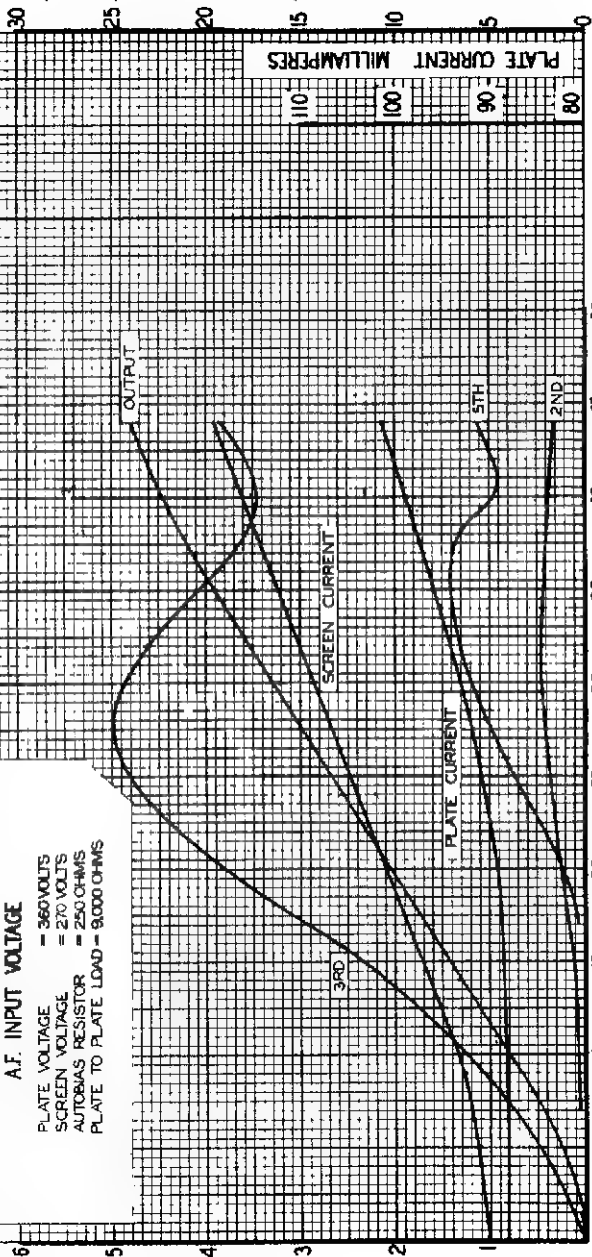
## PUSH-PULL CLASS "AB<sub>1</sub>" AMPLIFIER

POWER OUTPUT, DISTORTION, SCREEN CURRENT  
& PLATE CURRENT VERSUS

A.F. INPUT VOLTAGE

- PLATE VOLTAGE = 360 VOLTS
- SCREEN VOLTAGE = 270 VOLTS
- AUTORAY RESISTOR = 250 OHMS
- PLATE TO PLATE LOAD = 9,000 OHMS

HARMONIC DISTORTION (PERCENT)



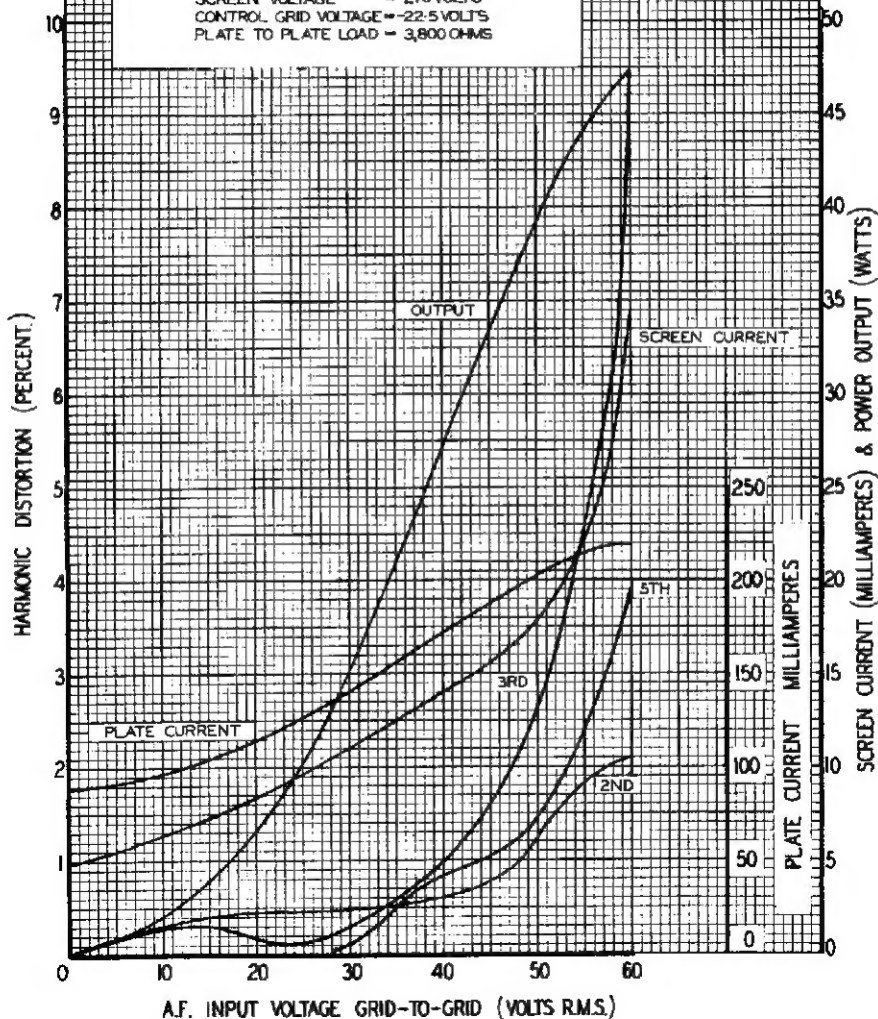
CURVE No. 307 340

PLATE CURRENT MILLIAMPERES

SCREEN CURRENT (MILLIAMPERES) & POWER OUTPUT (WATTS)

VALVE TYPE 807  
 PUSH-PULL CLASS "AB<sub>1</sub>" AMPLIFIER  
 POWER OUTPUT, DISTORTION, SCREEN CURRENT  
 & PLATE CURRENT VERSUS  
 A.F. INPUT VOLTAGE

PLATE VOLTAGE = 360 VOLTS  
 SCREEN VOLTAGE = 270 VOLTS  
 CONTROL GRID VOLTAGE = -22.5 VOLTS  
 PLATE TO PLATE LOAD = 3,800 OHMS



MILITARY SPECIFICATION SHEET  
ELECTRON TUBES, TRANSMITTING  
TYPES 807 AND 1625 1

The complete requirements for procuring the electron tubes described herein shall consist of this document and the latest issue of MIL-E-1.

This specification is mandatory for use by all Departments and Agencies of the Department of Defense.

**DESCRIPTION:** Amplifier, beam power, F1 = 60 MHz, F2 = 125 MHz

Outline --- 16-2 (ELA)

Base

807 --- A5-11 (low-loss phenolic)  
1625 --- A7-13 (low-loss phenolic)

Cap --- C1-1

Envelope --- ST16

Cathode --- Coated unipotential

Base connections:

Pin No. Element	1	2	3	4	5	6	7	Cap
807	h	g2	g1	k, g3 (Note 2)	h	---	---	a
1625	h	nc	g2	g1	nc	k, g3 (Note 2)	h	a

**ABSOLUTE-MAXIMUM RATINGS:**

Parameter: Unit:	Ef V	Eb Vdc	Ec1 Vdc	Ec2 Vdc	Ib mA	Ic1 mA	Pg2 W	Pp W	Pi W	Ⓒ Ehk v	Modu- lation ---	Alt ft
Type 807												
Class B AF:	$6.3 \pm 10^{-7}$	600	---	300	120	---	3.5	25	60	135	---	10,000
Class B RF:	$6.3 \pm 10^{-7}$	600	---	300	80	---	2.5	25	37.5	135	---	10,000
Class C Telep:	$6.3 \pm 10^{-7}$	475	-200	300	83	5	2.5	16.5	40	135	Anode	10,000
Class C Teleg:	$6.3 \pm 10^{-7}$	600	-200	300	100	5	3.5	25	60	135	---	10,000

**TEST CONDITIONS:** 6.3 600 -29 300 --- --- --- --- --- --- --- ---

Type 1625

Class B AF:	$12.6 \pm 10^{-7}$	600	---	300	120	---	3.5	25	60	135	---	10,000
Class B RF:	$12.6 \pm 10^{-7}$	600	---	300	80	---	2.5	25	37.5	135	---	10,000
Class C Telep:	$12.6 \pm 10^{-7}$	475	-200	300	83	5	2.5	16.5	40	135	Anode	10,000
Class C Teleg:	$12.6 \pm 10^{-7}$	600	-200	300	100	5	3.5	25	60	135	---	10,000

**TEST CONDITIONS:** 12.6 Vdc 600 -29 300 --- --- --- --- --- --- --- ---

**GENERAL:**

Qualification - Required

1/ See note 1

Ⓒ denotes changes

807, 1625

METHOD	REQUIREMENT OR TEST	CONDITIONS	AQL (PERCENT DEFECTIVE)	INSPECTION LEVEL OR CODE	SYMBOL	LIMITS		UNIT
						MIN	MAX	
	<u>Qualification inspection</u>							
1236	Power oscillation (2)	Power oscillation (1); F = 60 MHz	---	---	Po	28	---	W
	<u>Quality conformance inspection, part 1</u>		Ⓒ					
1231	Emission	E <sub>b</sub> = E <sub>c1</sub> = E <sub>c2</sub> = 50 Vdc (see note 3)	0.65	II	I <sub>s</sub>	300	---	mAdc
1236	Power oscillation (1)	E <sub>c2</sub> = 200 Vdc; R <sub>g</sub> = 10,000 ohms; I <sub>c1</sub> = 6 mAdc; I <sub>b</sub> = 100 mAdc; F = 15 MHz	0.65	II	Po	33	---	W
1256	Electrode current (1) (anode)		0.65	II	I <sub>b</sub>	24	48	mAdc
1266	Total grid current	See note 3	0.65	II	I <sub>c</sub>	---	-4.0	μAdc
Ⓒ 1201	Short and discontinuity detection		0.4	II	---	---	---	---
	<u>Quality conformance inspection, part 2</u>							
1031	Low frequency vibration	E <sub>b</sub> = 250 Vdc; E <sub>c2</sub> = 100 Vdc; E <sub>c1</sub> = -10 Vdc; R <sub>p</sub> = 2,000 ohms	---	---	Fp	---	500	mVac
1036	Bump	Hammer angle = 20°	---	---	---	---	---	---
1301	Heater current Type 807		---	---	II	810	990	mA
	Type 1625		---	---	II	405	495	mA
Ⓒ 1336	Heater-cathode leakage		---	---	I <sub>hk</sub>	---	100	μAdc
Ⓒ 1256	Electrode current (2) (anode)	E <sub>c1</sub> = -100 Vdc	---	---	I <sub>b</sub>	---	0.5	mAdc
Ⓒ 1256	Electrode current (screen)		---	---	I <sub>c2</sub>	0	4.0	mAdc
1266	Primary grid emission Type 807	E <sub>c2</sub> = 175 Vac (approx); E <sub>b</sub> = E <sub>c2</sub> = 0; E <sub>c1</sub> = 0 to 6 Vdc; P <sub>e2</sub> = 5 W (see note 4)	---	---	I <sub>c2</sub>	---	-750	μAdc
1306	Transconductance Type 1625	E <sub>b</sub> = E <sub>c2</sub> = 250 Vdc; E <sub>c1</sub> = -14 Vdc	---	---	S <sub>m</sub>	5.100	6.900	μmhos
1236	Internal insulation		---	---	---	---	---	---
1331	Direct-interelectrode capacitance	Shield No. 312 Without shield	---	---	C <sub>gp</sub> C <sub>in</sub> C <sub>out</sub>	---	0.2 10.0 5.3	pF pF pF
Ⓒ 1216	Base material insulating quality		---	---	---	---	---	---

METHOD	REQUIREMENT OF TEST	CONDITION	NO. (PERCENT) DEFECTIVE	INSPECTION LEVEL DEFECTS	SYMBOL	LIMITS		UNIT
						MIN	MAX	
	<u>Quality conformance inspection, part 2</u> -Continued							
(C) 1101	Secureness of base, cap. or insert		---	---	---	---	---	---
(C) 1105	Permanence of marking		---	---	---	---	---	---
	<u>Quality conformance inspection, part 3</u>							
---	Life-test provisions	Group B: Ehk - 135 V	---	---	---	---	---	---
---	Life-test end points (500 hours)	Total grid current and Power oscillation (1)	---	---	Ic1 Po	0 27	-4.0 ---	$\mu$ Adc W

## NOTES:

1. Tube type 5333 has been deleted from this tube specification sheet. For replacement purposes use tube type 5933WA. MIL-E-1-652.
2. The beam forming plate lead and the cathode lead shall be individually passed through the glass stem of the tube and shall be electrically connected together only at the base pin.
3. This test to be performed at the conclusion of the holding period.
4. A protective resistor of 15,000 ohms shall be placed in series with the primary emission current meter. Grid No. 2 input power shall be calculated as 2.4C times the product of the rectified current and rectified voltage. Test duration shall be sufficient to obtain a stabilized negative Ic2 value.

Custodians:  
Army - EL  
Navy - EC  
Air Force - 80

Preparing activity: Navy - EC

Agent: DSA - ES

(Project 5960-2425-52)

Review activities:  
Army - EL  
Navy -  
Air Force - 11, 80  
DSA - ES

User activities:  
Army - MU, WC  
Navy - AS, OS, MC, CG, SH  
Air Force - 19